ALLDATA REPAIR S3000

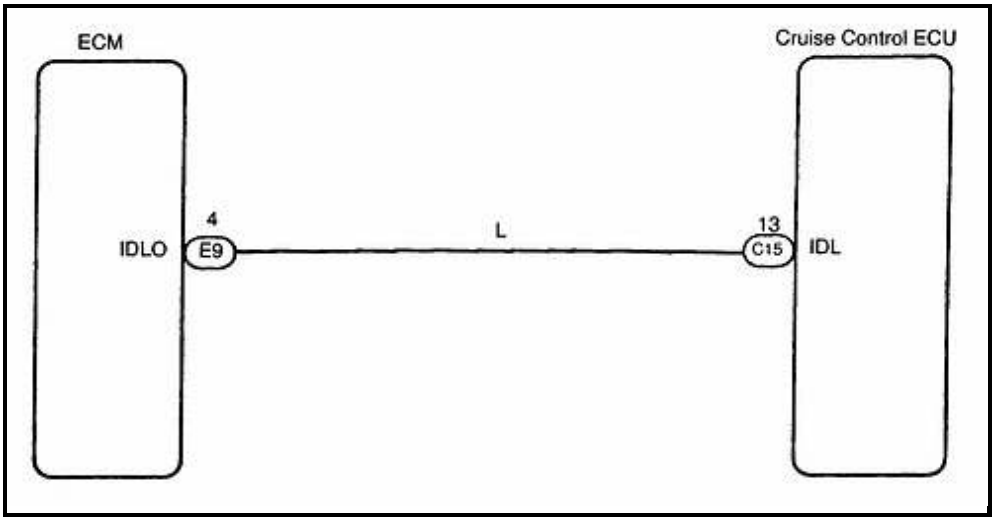
**DTC 51 Idle Signal Circuit**

**CIRCUIT DESCRIPTION**

When the idle switch is turned **ON,** a signal is sent to the ECU. The ECU uses this signal to correct the discrepancy between the throttle valve position and the actuator position sensor value to enable accurate cruise control at the set speed. If the idle switch is malfunctioning, problem symptoms also occur in the engine, so also inspect the engine.

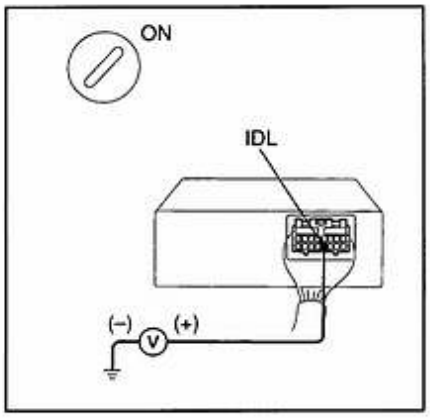
| DTC No. | Detection Item | Trouble Area |
|---|---|---|
| 51 | Short in idle signal circuit. | • Harness or connector between ECM and throttle position sensor<br>• Throttle position sensor<br>• Harness or connector between cruise control ECU and ECM<br>• Cruise control ECU |

**DETECTING CONDITIONS**




**WIRING DIAGRAM**

| 1 | Check voltage between terminal IDL of cruise control ECU connector and body ground. |
|---|---|




**PREPARATION:**

(a) Remove the ECU with connector still connected.
(b) Disconnect the ECM connector.
(c) Turn ignition switch ON.

**CHECK:**

Measure voltage between terminal IDL of ECU connector and body ground when the throttle valve is fully closed and fully opened.

**OK:**

| Throttle valve position | Voltage |
|---|---|
| Fully opened | 10 – 14 V |
| Fully closed | Below 2 V |

**OK** → **Proceed to next circuit inspection shown on Diagnosis by Symptom.**

**NG**

**Step 1**

| 2 | Check harness and connector between ECM and throttle position sensor. |
|---|---|

**NG** → **Repair or replace harness or connector.**

**OK**

**Step 2**

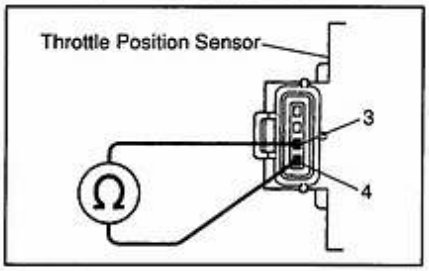
| 3 | Check throttle position sensor circuit. |
|---|---|

**NG** → **Replace throttle position sensor.**

**OK**

**Step 3**

| 4 | Check throttle position sensor. |
|---|---|




**PREPARATION:**
Disconnect the throttle position sensor connector.
**CHECK:**
Measure resistance between terminals 3 and 4 of throttle position sensor connector when the throttle valve is fully closed and fully opened.
**OK:**

| Throttle valve position | Resistance |
|---|---|
| Fully opened | 1 MΩ or higher |
| Fully closed | Below 2.3 kΩ |

NG → Replace throttle position sensor.

OK

**Step 4**

| 5 | Check for open and short in harness and connector between cruise control ECU and ECM. |
|---|---|

NG → Repair or replace harness or connector.

OK

Check and replace cruise control ECU.

**Step 5**

## INSPECTION PROCEDURE

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